# STATE OF CONNECTICUT HOSPITAL PAYMENT MODERNIZATION ISSUE PAPER — HOSPITAL REVENUE NEUTRALITY

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| Issue Description: | The Connecticut Department of Social Services (DSS) has selected a goal of hospital-specific revenue neutrality for the initial implementation of All Patient Refined Diagnosis Related Groups (APR-DRG) payments. The State of Connecticut acute care hospital reimbursement is currently based on a hospital-specific target cost per discharge, as well as pass-through amounts calculated during a retrospective reconciliation process. As the State transitions to APR-DRG payments starting on January 1, 2015, how will hospital-specific revenue neutrality be addressed? |
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## Overview

The initial implementation of the APR-DRG payment system is intended to be revenue neutral by hospital. Revenue neutrality will be based on 2012 hospital-specific reconciliation data. This issue paper identifies how the various components of the 2012 reconciliation process will be handled under the APR-DRG system.

### Definition and Context

In this case "revenue neutrality" means:

1. A new, more accurate payment system will be developed based on an analytical data set.
2. The new payment system will generate the same revenue to each hospital as the current system, assuming the same utilization of services as contained in the analytical data set, subject to the approaches defined in the remainder of this paper.
3. By design, the revenue neutral system is *not* likely to generate the same payments as the prior system when utilization patterns change, however, because it more accurately recognizes current acuity:
   A. If the first year utilization were exactly the same as the base year, revenue would remain the same.
   B. If the first year utilization is almost identical, but with one higher acuity admission — revenue will increase accordingly (and be higher than the current method would generate).
   C. If the first year utilization is almost identical, but with one lower acuity admission — revenue will decrease accordingly (and be lower than the current method would generate).

## Current Payment Methodology

The current State of Connecticut acute hospital inpatient reimbursement methodology pays a hospital-specific per diem rate which is retrospectively reconciled to a hospital specific per discharge target rate, plus a pass-through of other costs.

The basics of the current reconciliation formula include:

- The Lower of 1) program discharges x target amount per discharge; or 2) total program inpatient operating costs (excluding capital-related costs, provider-based physician costs and medical education costs).
  Plus:
- Capital-related costs for Medicaid inpatient routine and ancillary services.
- Program provider-based physician costs.
- Organ acquisition costs (kidney, liver, and heart).
- Medicare Severity DRG payments for heart and liver transplants (with offset of standard discharge payment).
- Costs for burn units certified by the American Burn Association.
- Direct graduate medical education payments (GME).
  Offset by:
- Indemnity payments — other party payors.
- Hospital acquired condition (HAC) payment adjustment.

In addition, under the current system there are various supplemental payments (for example, disproportionate share payments) made to hospitals which have been paid outside the reconciliation process, and will remain outside the APR-DRG system.

## APR-DRG Payment Methodology

The new payment methodology is intended to establish prospective payment, and seeks to eliminate or limit the need for retrospective reconciliation. The table below addresses each of the items from the current reconciliation process with respect to its inclusion or exclusion from the new target amount.

| Item from 2012 Reconciliation | Include in Target? | Notes |
|---|---|---|
| Lower of 1) target amount; or 2) inpatient (IP) operating costs (excluding capital, provider-based physicians, and medical education) | Y | 2012 adult behavioral health and rehabilitation will be separately identified. |
| Capital-related costs for Medicaid inpatient routine and ancillary services | Y | Capital costs based on 2012 reconciliation amounts. |
| Program provider-based physician costs | N | Transitioning to direct billing under the professional fee schedules. |
| Organ acquisition costs (kidney, heart, and liver) | N | Organ acquisition costs will be handled outside of the APR-DRG system. |

| Item from 2012 Reconciliation | Include in Target? | Notes |
|---|---|---|
| Heart and liver transplants | Y | Transplants will be paid via APR-DRG. |
| Costs for burn units certified by the American Burn Association | Y | Burn admissions will be paid via APR-DRG. |
| Direct GME Payments | N | GME will be handled as a separate calculation and payment. |
| Indemnity payments — other party payors | N | Third party liability recoveries will be removed at the time of claims adjudication. |
| HAC payment adjustment | N | Claims will be reduced for HAC at the time of claims adjudication. |

In addition, the target will include payments for Child Behavioral Health (less the hospital based physician portion of those payments).

The process above results in total hospital revenue neutral target payments, which include IP claims that will be paid under an APR-DRG method and adult and child behavioral health and rehabilitation under a per diem method.

Total hospital target payments will be comprised of four separate categories:
1. Adult behavioral health claims.
2. Child behavioral health claims.
3. Rehabilitation claims.
4. APR-DRG claims.

The following example details the derivation of the revenue neutral rate.

# Connecticut Department of Social Services
## Example Revenue Neutrality Calculation

### *Data Inputs*

| | |
|---|---|
| Hospital-Specific Revenue Neutral Target Payments (includes payment for child behavioral health claims) | $ 21,000,000 |
| Hospital-Specific Number of Discharges | 2,910 |
| Documentation and Coding Improvements (DCI) Reserve Percentage | 5% |
| Hospital-Specific Case Mix Index (CMI) | 0.9233 |
| Hospital-Specific Indirect Medical Education (IME) Factor | N/A |
| Hospital-Specific Calculated Outlier Payments | $ 950,000 |
| Hospital-Specific Number of Adult Behavioral Health Days (includes substance abuse) | 4,500 |
| Hospital-Specific Number of Child Behavioral Health Days (includes substance abuse) | 1,000 |
| Hospital-Specific Number of Rehab Days | 750 |
| Hospital-Specific Adult Behavioral Health Per Diem Rate | $ 1,050 |
| Hospital-Specific Child Behavioral Health Per Diem Rate | $ 1,050 |
| Hospital-Specific Rehab Per Diem Rate | $ 1,370 |

### *Step 1: Calculate Estimated Adult Behavioral Health Payments*

| | | |
|---|---|---|
| Hospital-Specific Adult Behavioral Health Per Diem Rate | | $1,050 |
| multiply: Hospital-Specific Number of Adult Behavioral Health Days | x | 4,500 |
| Hospital-Specific Adult Behavioral Health Payments | = | $ 4,725,000 |

### *Step 2: Calculate Estimated Child Behavioral Health Payments*

| | | |
|---|---|---|
| Hospital-Specific Child Behavioral Health Per Diem Rate | | $1,050 |
| multiply: Hospital-Specific Number of Child Behavioral Health Days | x | 1,000 |
| Hospital-Specific Child Behavioral Health Payments | = | $ 1,050,000 |

### *Step 3: Calculate Estimated Rehab Payments*

| | | |
|---|---|---|
| Hospital-Specific Rehab Per Diem Rate | | $1,370 |
| multiply: Hospital-Specific Number of Rehab Days | x | 750 |
| Hospital-Specific Rehab Payments | = | $ 1,027,500 |

### *Step 4: Calculate Hospital-Specific DCI Reserve*

| | | |
|---|---|---|
| Hospital-Specific Revenue Neutral Target Payments | | $21,000,000 |
| subtract: Hospital-Specific Adult Behavioral Health Payments | - | $4,725,000 |
| subtract: Hospital-Specific Child Behavioral Health Payments | - | $1,050,000 |
| subtract: Hospital-Specific Rehab Payments | - | $1,027,500 |
| Hospital-Specific Revenue Neutral Target less Behavioral Health and Rehab | = | $14,197,500 |
| multiply: DCI Reserve % | x | 5% |
| Hospital-Specific DCI Reserve | = | $709,875 |

### *Step 5: Calculate Hospital-Specific APR-DRG Base Rate*

| | | |
|---|---|---|
| Hospital-Specific Revenue Neutral Target Payments | | $21,000,000 |
| subtract: Hospital-Specific Adult Behavioral Health Payments | - | $4,725,000 |
| subtract: Hospital-Specific Child Behavioral Health Payments | - | $1,050,000 |
| subtract: Hospital-Specific Rehab Payments | - | $1,027,500 |
| subtract: Hospital-Specific DCI Reserve | - | $709,875 |
| subtract: Hospital-Specific Calculated Outlier Payments | - | $950,000 |
| Hospital-Specific Inlier Portion Revenue Neutral Target Payments | = | $12,537,625 |
| divide by: Hospital-Specific CMI | / | 0.9233 |
| divide by: 1 + Hospital-Specific IME | | N/A |
| divide by: Hospital-Specific Number of Discharges | / | 2,910 |
| Hospital-Specific APR-DRG Base Rate | | $4,666 |

### *Step 6: Revenue Neutral Target Check*

| | | |
|---|---|---|
| Hospital-Specific Number of Discharges | | 2,910 |
| multiply: Hospital-Specific APR-DRG Base Rate | x | $4,666 |
| multiply: Hospital-Specific CMI | x | 0.9233 |
| multiply: 1 + Hospital-Specific IME | x | N/A |
| Hospital-Specific Inlier Portion Revenue Neutral Target Payments | = | $12,537,625 |
| add: Hospital-Specific Calculated Outlier Payments | + | $950,000 |
| add: Hospital-Specific Adult Behavioral Health Payments | + | $4,725,000 |
| add: Hospital-Specific Child Behavioral Health Payments | + | $1,050,000 |
| add: Hospital-Specific Rehab Payments | + | $1,027,500 |
| Total Hospital-Specific Acute Care Payments | = | $20,290,125 |
| add: Hospital-Specific DCI Reserve | + | $709,875 |
| Hospital-Specific Revenue Neutral Target Payments | = | $21,000,000 |

## Follow-up Questions

In a meeting with hospitals and the Connecticut Hospital Association questions arose around the interactions of the policies for outliers and transfers with the goal of revenue neutrality. Specifically, there were concerns that these policies could mathematically reduce the base rate, and that future year revenue neutrality will not be maintained if, for example, the number or ratio of outliers is not consistent with the data year.

Restating from above, for this project "revenue neutrality" means:

1. A new, more accurate payment system will be developed based on an analytical data set.
2. The new payment system will generate the same revenue to each hospital as the current system, assuming the same utilization of services as contained in the analytical data set, subject to the approaches defined in the remainder of this paper.
3. By design, the revenue neutral system is *not* likely to generate the same payments as the prior system when utilization patterns change, however, because it more accurately recognizes current acuity.

The discussion below attempts to add clarity on these topics.

### Outliers

1. The outlier system pays more (and more accurately) for hospitals that experience the higher costs of the most difficult cases. This policy recognizes that acuity, and reduces disincentives to providing services that are associated with higher odds of outlier cases occurring (for example, immature neonates, trauma cases, etc.).
   A. If the first year utilization were exactly the same as the base year, revenue would remain as modeled (revenue neutral).
   B. If the first year utilization is almost identical, but with additional outlier admissions — revenue will increase accordingly (and be higher than the current method would provide). Payment will be more accurate because the costs associated with the first year's utilization will be higher as well.
   C. If the first year utilization is almost identical, but with fewer outlier admissions — revenue will decrease (and be lower than the current method would provide), based on lower total acuity. Payment will be more accurate because the costs associated with the first year's utilization will be lower as well.

See the attached Examples.

### Transfers

1. For transfer cases, a full course of treatment is typically not provided, thus these cases generate lower cost cases than the average within a DRG. Thus, within a DRG reimbursement system, transfer cases receive a prorated payment to reflect these lower costs. The discussion with the hospitals on this topic was more focused on the definition of transfers than on the transfer payment policy. Two different kinds of transfers were identified:
   A. Medical to Behavioral Health.
   B. Medical to Medical (more acute facility).

DSS has determined that the Medical to Behavioral Health transfers will be treated as two separate payment events — an APR-DRG payment being made for the first event and per diem payment being made for the second event. These situations will be considered as two admissions and not trigger the “transfer payment policy”.

The transfer policy for the Medical to Medical transfer (to a facility that can handle a higher level of acuity) represents a very small portion of total costs, solves a difficult problem of paying the transferring hospital far too much, or nothing at all, and has the effect of increasing the base rate (relative to paying both facilities using a high cost APR-DRG weight). If DSS paid the full APR-DRG payment to both facilities, there would be an incentive for hospitals to increase the number of transfers. If DSS did not pay anything to the transferring facility, there could be an incentive to retain cases that would be better handled in a different facility.

The hospital from which the member is transferred will be reimbursed a per diem, based upon the DRG base payment divided by the DRG average length of stay. The resulting amount is multiplied by the sum of one plus the actual length of stay, not to exceed the total DRG base payment.

The hospital to which the member is transferred shall be reimbursed the full APR-DRG payment without any reduction due to the transfer.

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# Payment Comparison with and without Outlier Claim

## Example 1 — Reimbursement Methodology Includes an Outlier Policy

**Outlier claims highlighted in red**

**Base Year Claim Set with Outlier Claim Present and Same Claim Set Paid with DRGs**

| DRG | Claim Cost | DRG WT | Outl Thresh | DRG Paid | Outl Payment | All DRG System Payments |
|---|---|---|---|---|---|---|
| A | 12,000 | 2.1667 | | 11,280.14 | | 11,280.14 |
| A | 14,000 | 2.1667 | | 11,280.14 | | 11,280.14 |
| B | 15,000 | 2.2778 | | 11,858.60 | | 11,858.60 |
| B | 10,000 | 2.2778 | | 11,858.60 | | 11,858.60 |
| B | 16,000 | 2.2778 | | 11,858.60 | | 11,858.60 |
| C | 10,000 | 1.7778 | | 9,255.50 | | 9,255.50 |
| C | 10,000 | 1.7778 | | 9,255.50 | | 9,255.50 |
| C | 12,000 | 1.7778 | | 9,255.50 | | 9,255.50 |
| C | 55,000 | 1.7778 | 40,000 | 9,255.50 | 11,250 | 20,505.50 |
| D | 2,500 | 0.4611 | | 2,400.64 | | 2,400.64 |
| D | 3,000 | 0.4611 | | 2,400.64 | | 2,400.64 |
| D | 2,800 | 0.4611 | | 2,400.64 | | 2,400.64 |
| Total | 162,300 | 19.6611 | | 102,360.00 | 11,250 | 113,610.00 |
| Avg Cost | 13,525.00 | | | | | |
| Current rate at 70% of cost | 9,467.50 | | | | | |
| Total Paid | 113,610.00 | | | 102,360.00 | 11,250 | 113,610.00 |
| Cost Coverage | 70.00% | | | | | 70.00% |

**Future Claim Set without Outlier Claim Present**

| DRG | Claim Cost | DRG WT | Outl Thresh | DRG Paid | Outl Payment | All DRG System Payments |
|---|---|---|---|---|---|---|
| A | 12,000 | 2.1667 | | 11,280.14 | | 11,280.14 |
| A | 14,000 | 2.1667 | | 11,280.14 | | 11,280.14 |
| B | 15,000 | 2.2778 | | 11,858.60 | | 11,858.60 |
| B | 10,000 | 2.2778 | | 11,858.60 | | 11,858.60 |
| B | 16,000 | 2.2778 | | 11,858.60 | | 11,858.60 |
| C | 10,000 | 1.7778 | | 9,255.50 | | 9,255.50 |
| C | 10,000 | 1.7778 | | 9,255.50 | | 9,255.50 |
| C | 12,000 | 1.7778 | | 9,255.50 | | 9,255.50 |
| | | | | - | | - |
| D | 2,500 | 0.4611 | | 2,400.64 | | 2,400.64 |
| D | 3,000 | 0.4611 | | 2,400.64 | | 2,400.64 |
| D | 2,800 | 0.4611 | | 2,400.64 | | 2,400.64 |
| | 107,300 | 17.8833 | | 93,104.50 | | 93,104.50 |
| | | | | 86.77% | | |

**Future Claim Set with an Additional Outlier Claim**

| DRG | Claim Cost | DRG WT | Outl Thresh | DRG Paid | Outl Payment | All DRG System Payments |
|---|---|---|---|---|---|---|
| A | 12,000 | 2.1667 | | 11,280.14 | | 11,280.14 |
| A | 14,000 | 2.1667 | | 11,280.14 | | 11,280.14 |
| B | 15,000 | 2.2778 | | 11,858.60 | | 11,858.60 |
| B | 10,000 | 2.2778 | | 11,858.60 | | 11,858.60 |
| B | 16,000 | 2.2778 | | 11,858.60 | | 11,858.60 |
| C | 10,000 | 1.7778 | | 9,255.50 | | 9,255.50 |
| C | 10,000 | 1.7778 | | 9,255.50 | | 9,255.50 |
| C | 12,000 | 1.7778 | | 9,255.50 | | 9,255.50 |
| C | 55,000 | 1.7778 | 40,000 | 9,255.50 | 11,250 | 20,505.50 |
| C | 55,000 | 1.7778 | 40,000 | 9,255.50 | 11,250 | 20,505.50 |
| D | 2,500 | 0.4611 | | 2,400.64 | | 2,400.64 |
| D | 3,000 | 0.4611 | | 2,400.64 | | 2,400.64 |
| D | 2,800 | 0.4611 | | 2,400.64 | | 2,400.64 |
| | 217,300 | 21.4389 | | 111,615.50 | | 134,115.50 |
| | | | | | | 61.72% |

DRG Rate Determination

| | |
|---|---|
| Total Paid | 113,610.00 |
| Outlier Carve-Out | 11,250.00 |
| Inliers | 102,360.00 |
| Total Weight | 19.6611 |
| Rate | 5,206.22 |

## Example 2 — Reimbursement Methodology Does Not Include an Outlier Policy

**Outlier claims highlighted in red**

**Base Year Claim Set with Outlier Claim Present and Same Claim Set Paid with DRGs**

| DRG | Claim Cost | DRG WT | DRG Paid |
|---|---|---|---|
| A | 12,000 | 2.1667 | 12,519.89 |
| A | 14,000 | 2.1667 | 12,519.89 |
| B | 15,000 | 2.2778 | 13,161.94 |
| B | 10,000 | 2.2778 | 13,161.94 |
| B | 16,000 | 2.2778 | 13,161.94 |
| C | 10,000 | 1.7778 | 10,272.73 |
| C | 10,000 | 1.7778 | 10,272.73 |
| C | 12,000 | 1.7778 | 10,272.73 |
| C | 55,000 | 1.7778 | 10,272.73 |
| D | 2,500 | 0.4611 | 2,664.49 |
| D | 3,000 | 0.4611 | 2,664.49 |
| D | 2,800 | 0.4611 | 2,664.49 |
| Total | 162,300 | 19.6611 | 113,610.00 |
| Avg Cost | 13,525.00 | | |
| Discharge rate at 70% | 9,467.50 | | |
| Total Paid | 113,610.00 | | |

**Future Claim Set without Outlier Claim Present**

| DRG | Claim Cost | DRG WT | DRG Paid |
|---|---|---|---|
| A | 12,000 | 2.1667 | 12,519.89 |
| A | 14,000 | 2.1667 | 12,519.89 |
| B | 15,000 | 2.2778 | 13,161.94 |
| B | 10,000 | 2.2778 | 13,161.94 |
| B | 16,000 | 2.2778 | 13,161.94 |
| C | 10,000 | 1.7778 | 10,272.73 |
| C | 10,000 | 1.7778 | 10,272.73 |
| C | 12,000 | 1.7778 | 10,272.73 |
| D | 2,500 | 0.4611 | 2,664.49 |
| D | 3,000 | 0.4611 | 2,664.49 |
| D | 2,800 | 0.4611 | 2,664.49 |
| Total | 107,300 | 17.8833 | 103,337.27 |

**Future Claim Set with an Additional Outlier Claim**

| DRG | Claim Cost | DRG WT | DRG Paid |
|---|---|---|---|
| A | 12,000 | 2.1667 | 12,519.89 |
| A | 14,000 | 2.1667 | 12,519.89 |
| B | 15,000 | 2.2778 | 13,161.94 |
| B | 10,000 | 2.2778 | 13,161.94 |
| B | 16,000 | 2.2778 | 13,161.94 |
| C | 10,000 | 1.7778 | 10,272.73 |
| C | 10,000 | 1.7778 | 10,272.73 |
| C | 12,000 | 1.7778 | 10,272.73 |
| C | 55,000 | 1.7778 | 10,272.73 |
| C | 55,000 | 1.7778 | 10,272.73 |
| D | 2,500 | 0.4611 | 2,664.49 |
| D | 3,000 | 0.4611 | 2,664.49 |
| D | 2,800 | 0.4611 | 2,664.49 |
| Total | 217,300 | 21.4389 | 123,882.73 |

DRG Rate Determination

| | |
|---|---|
| Total Paid | 113,610.00 |
| Outlier Carve-Out | - |
| Inliers | 113,610.00 |
| Total Weight | 19.6611 |
| Rate | 5,778.41 |

| Cost Coverage | Base Year (Claim Cost) | Base Year (DRG Paid) | Future without Outlier | Future with Additional Outlier |
|---|---|---|---|---|
| Cost Coverage | 70.00% | 70.00% | 96.31% | 57.01% |

**Summary**

Outlier policies help to mitigate risk if outlier cases occur. As seen in the examples above, if a hospital has an outlier in the base year claim set but fewer outliers in future years, their cost coverage increases regardless if there is or is not an outlier payment methodology in place. If additional outlier cases occur in future years, cost coverage will decrease regardless. However, with an outlier payment methodolgy in place, this redcution in cost coverage is mitigated.